



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/635,561	08/10/2000	Shinsuke Yokokawa	Q60393	6018

7590 01/26/2004  
Sughrue Mion Zinn MacPeak & Seas PLLC  
2100 Pennsylvania Avenue NW  
Washington, DC 20037-3213

EXAMINER
----------

PHAM, THOMAS K

ART UNIT	PAPER NUMBER
----------	--------------

2121

DATE MAILED: 01/26/2004

15

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/635,561

Applicant(s)

YOKOKAWA, SHINSUKE

Examiner

Thomas K Pham

Art Unit

2121

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

***Notice to Applicant(s)***

1. Claims 1-3 of U.S. Application 09/635,556 filed on 08/10/2000 are presented for examination in response to the Request for Continued Examination submitted on 12/22/2003.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Rubinstein U.S.

Patent No. 5,077,686.

**Regarding claim 1**

Rubinstein teaches a programmable controller for controlling a controlled apparatus by pulse output, comprising:

- a pulse generating section for outputting a pulse string having a set cycle (fig. 3, element 310)
- a pulse dividing section for dividing the pulse string output from said pulse generating section at a predetermined dividing ratio (fig. 2, elements 211, 212, 213 or 214) and for outputting an interruption request signal having a cycle which is n times as great as the cycle of the pulse string, where n is a positive integer (col. 4 lines 22-46, "Each of the processor ... with the 16 Mhz clock");

Art Unit: 2121

- a central processing unit (fig. 5, element 512) for executing an interruption processing in response to the interruption request signal output from said pulse dividing section (fig. 2, element 211-214 supply interrupt signals to the processors 131-134, respectively) so as to directly control the output of said pulse generating section (fig. 5, element 512 is directly control clock generator 500 via line 514).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rubinstein in view of Gupta et al. U.S. Patent No. 5,996,083 (hereinafter Gupta).

**Regarding claim 2**

Rubinstein teaches a central processing unit sets a dividing ratio to be used for division of the pulse dividing section but does not teach the CPU controls the number of pulses output from said pulse generating section, and sets the dividing ratio to be equal to the number of pulses which have not been output when the number of the pulses which are output is smaller than 2n.

However, Gupta teaches the CPU controls the number of pulses output from said pulse generating section (col. 7 lines 21-38, "a different approach ... value in that field") and discloses available software programs can be use to set the dividing ratio values (col. 5 lines 61-64, "The power control register 106 ... the manufacturing process") to integer ratios (col. 6 lines 50-59,

Art Unit: 2121

“The extent to which ... signal down to zero”) and could be adjust by software programs according to the designer (col. 7 lines 28-38, “The clock divider output ... value in that field”). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to provide a software program that sets the dividing ratio equal to the number of pulses which have not been output when the number of the pulses which are output is smaller than  $2n$ , in order to conserve power during high-speed processing of a CPU.

**Regarding claim 3**

Gupta teaches a central processing unit changes the dividing ratio to be used for the division of said pulse dividing section depending on the cycle of the pulse string output from said pulse generating section (col. 7 lines 21-38, “a different approach ... value in that field”).

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner *Thomas Pham*; whose telephone number is (703) 305-7587 and fax number is (703) 746-8874, Monday-Thursday and every other Friday from 7:30AM- 5:00PM EST or contact Supervisor *Mr. Anil Khatri* at (703) 305-0282.

Any response to this office action should be mailed to: **Director of Patents and Trademarks Washington, D.C. 20231**, or **Hand-delivered** responses should be brought to **Crystal Park II, 2121 Crystal Drive Arlington, Virginia, (Receptionist located on the 4th floor)**, or fax to the **official fax number (703) 872- 9306**.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

**Thomas Pham**  
*Patent Examiner*

TP

January 21, 2004



**ANIL KHATRI**  
**SUPERVISORY PATENT EXAMINER**